

MANUFACTURING EXTENSION PARTNERSHIP

Success Stories from the Field

Goulds Pumps/itt Industries

Manufacturers Resource Center

Goulds Pumps Uses Lean Manufacturing Techniques To Strive For Continuous Improvement

Client Profile:

Goulds Pumps supplies the global market with high-quality chrome and stainless steel pumping products. With over one million installed process pumps in service, Goulds Pumps is the dominant brand worldwide. The company, in business for over 150 years, is located in Ashland, Pennsylvania, and employs less than 500 people.

Situation:

Goulds Pumps was pursuing lean manufacturing to reduce lead-time and costs and improve quality, but it needed help implementing the new techniques. One of the areas the company wanted to focus on, stainless steel castings, directly affects on-time pump shipments to customers throughout the world. Goulds Pumps contacted the Manufacturers Resource Center (MRC), a NIST MEP network affiliate, for assistance.

Solution:

Under MRC's expert guidance, a value stream mapping team evaluated the stainless steel casting process and found the Air-arc operation to be particularly problematic. During the Air-arc process, gates and risers are removed from stainless steel castings by using a hand-held "Air-arc" torch, which utilizes high-voltage electric current and compressed air. This process required a considerable amount of employee overtime and caused a work-in-process bottleneck.

MRC formed an Air-arc kaizen team, which incorporated individuals from both the shop and the office. The team's main objectives were to increase productivity (throughput) and eliminate the bottleneck. Over the course of the five-day kaizen event, the team implemented several lean concepts, including line-balancing, one-piece flow, work-cell design, 5-S, visual controls, and total product management. The new process proved a complete success, and the company is free to pursue improvements in other areas of the plant.

Results:

Exceeded \$140,000 per year in total cost savings.

Completely eliminated the bottleneck, resulting in a 100 percent decrease in work-in-process (WIP).

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Decreased overall required WIP space by 42 percent and reduced the average cost per piece by 50 percent.

Testimonial:

"Even successful businesses can be improved upon with a few lean manufacturing techniques. This kaizen was very successful and we have many more kaizen events planned with the Manufacturers Resource Center for 2002."

Leon Jurgill, Six Sigma Black Belt